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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/618,737	07/15/2003	Robert A. Kagy	8350.3158	7261
7590 08/18/2004			EXAMINER	
Finnegan, Henderson, Farabow, Garrett & Dunner, L.L.P. 1300 I Street, N.W. Washington, DC 20005-3315			CHANG, CHING	
			ART UNIT	PAPER NUMBER
			3748	

DATE MAILED: 08/18/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

<p align="center">Office Action Summary</p>	Application No. 10/618,737	Applicant(s) KAGY ET AL.	
	Examiner Ching Chang	Art Unit 3748	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☐ Responsive to communication(s) filed on ____.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-30 is/are pending in the application.
- 4a) Of the above claim(s) ____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) ____ is/are allowed.
- 6) ☒ Claim(s) 1-30 is/are rejected.
- 7) ☐ Claim(s) ____ is/are objected to.
- 8) ☐ Claim(s) ____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on ____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
 Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
 Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. ____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|---|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. ____. |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date <u>07/15/2003</u> . | 6) <input type="checkbox"/> Other: ____. |

DETAILED ACTION

Claim Rejections - 35 USC § 102

1. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

2. ***Claims 1-5, and 8 are rejected under 35 U.S.C. 102(e) as being anticipated by Ashida (US Patent 6,640,758).***

Ashida discloses a method of controlling an engine having a valve actuator (2), comprising: sensing (6) a first parameter indicative of a first temperature (TW) the engine; sensing (7) a second parameter indicative of a second temperature (TINT) of the engine; and disabling the valve actuator to prevent the implementation of a variation on conventional engine valve actuation timing in response to each of the first and second temperatures being below a predetermined value (Th), further including enabling the valve actuator to allow the implementation of a variation on conventional engine valve actuation timing in response to each of the first and second temperatures being above a predetermined value (See Col. 4, line 63 through Col. 8, line 41), wherein the first temperature is an engine coolant temperature and the second temperature is an

Art Unit: 3748

intake manifold temperature; and the said method further including enabling the valve actuator when the engine coolant temperature is above the predetermined value, disabling the valve actuator when the engine coolant temperature is below the predetermined value and the intake manifold temperature is above the predetermined value, monitoring the operation of the valve actuator to detect proper operation of the valve actuator (See Col. 4, line 63 through Col. 8, line 41).

Claim Rejections - 35 USC § 103

3. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

4. ***Claims 1-3 are rejected under 35 U.S.C. 103(a) as being unpatentable over Kakuho et al. (US Patent 6,718,957) in view of Ashida (US Patent 6,640,758).***

Kakuho discloses a method of controlling an engine having a valve actuator (124, 126), sensing (148) a first parameter indicative of a first temperature (150) of the engine; sensing (152) a second parameter indicative of a second temperature (154) of the engine; and further including enabling the valve actuator to allow the implementation of a variation on conventional engine valve actuation timing in response to each of the first and second temperatures being above a predetermined value, wherein the first

Art Unit: 3748

temperature is an engine coolant temperature and the second temperature is an intake manifold temperature.

Kakuho discloses the invention as recited above, however, fails to disclose to disable the valve actuator to prevent the implementation of a variation on conventional engine valve actuation timing in response to each of the first and second temperatures being below a predetermined value.

The patent to Ashida on the other hand, teaches that it is conventional in the engine control art, to utilize a controller (3) to disable a valve actuator (2) to prevent the implementation of a variation on conventional engine valve actuation timing in response to each of the first (TW) and second (TINT) temperatures being below a predetermined value (Th).

It would have been obvious to one having ordinary skill in the art at the time the invention was made to have utilized the engine control strategy as taught by Ashido in the Kakuho method, since the use thereof would provide an improved engine control strategy to a valve actuator.

5. Claims 12-30 are rejected under 35 U.S.C. 103(a) as being unpatentable over Hu (US Patent 5,537,976) in view of Ashida (US Patent 6,640,758).

Ashda discloses an engine (10) system, comprising, an engine block defining a cylinder, a piston slidably disposed within the cylinder, the piston moveable between a top dead center position and a bottom dead center position; a valve actuation system for an engine having an intake valve (30) moveable between a first

Art Unit: 3748

position where the intake valve prevents a flow of fluid and a second position where the intake valve allows a flow of fluid, comprising: a valve actuator (50, 58) adapted to selectively engage the intake valve to prevent the intake valve from returning to the first position; a controller (100) adapted to receive signals and to disable or to enable the valve actuator to prevent the valve actuator from engaging the intake valve; further including a control valve (52) moveable between a first position where the valve actuator is enabled and a second position where the valve actuator is disabled, further including a detection system (100, 102) adapted to determine whether the valve actuator is operating properly, further including a cam assembly (40, 42a, 42b) connected to the intake valve and adapted to move the intake valve between the first and second positions.

Hu discloses the invention as recited above, however, fails to disclose the controller being adapted to control the valve actuator based on two temperature signals.

The patent to Ashida on the other hand, teaches that it is conventional in the engine valve control art, to utilize a controller (3) adapted to control an engine valve actuator (2), based on two sensed signals (6, 7) indicating an engine coolant temperature (TW) and an intake air temperature (TINT), wherein a controller adapted to disable the valve actuator to prevent the valve actuator from engaging the intake valve when each of the first and second temperatures are below a predetermined value (Th) and adapted to enable the valve actuator to allow the valve actuator to engage the intake valve when each of the first and second temperatures are above a predetermined value, wherein the controller is adapted to enable the valve actuator when the engine

Art Unit: 3748

coolant temperature is above the predetermined value and adapted to disable the valve actuator when the engine coolant temperature is below the predetermined value and the intake manifold temperature is above the predetermined value. (See Col. 4, line 63 through Col. 8, line 41).

It would have been obvious to one having ordinary skill in the art at the time the invention was made to have utilized the controller adapted to the two sensed temperature signals to control the valve actuator as taught by Ashida in the Hu device, since the use thereof would provide an improved engine system with a controller more adapted to the engine operating conditions, in order to control an engine valve properly.

6. *Claims 6 is rejected under 35 U.S.C. 103(a) as being unpatentable over Ashida (as applied to claim 1 above) in view of Toriumi (US Patent 6,374,783), and further in view of design choice.*

Ashida discloses the invention, however, fails to disclose the predetermined value is 20° C.

The patent to Toriumi on the other hand, teaches that it is conventional in the engine valve control art, to choose a predetermined temperature at 0° C

It would have been obvious to one having ordinary skill in the art at the time the invention was made to have utilized the predetermined temperature as taught by Toriumi and further make a design choice of it at 20° C in the Ashida method, since the use thereof would provide an alternative method to control an engine valve actuator.

7. Claim 7 is rejected under 35 U.S.C. 103(a) as being unpatentable over Ashida (as applied to claim 1 above) in view of Hu (US Patent 5,537,976).

Ashida discloses the invention, however, fails to disclose the said control method including closing a control valve to enable the valve actuator.

The patent to Hu on the other hand, teaches that it is conventional in the engine valve actuator control art, to utilize a control method including closing a control valve (52) to enable a valve actuator (50, 58).

It would have been obvious to one having ordinary skill in the art at the time the invention was made to have utilized the control method including closing a control valve to enable the valve actuator as taught by Hu in the Ashida method, since the use thereof would provide an alternative method to control an engine valve actuator.

8. Claims 9-11 are rejected under 35 U.S.C. 103(a) as being unpatentable over Ashida (as applied to claims 1, and 8/1 above) in view of Kakuho (US Patent 6,718,957).

Ashida discloses the invention, however, fails to disclose to limit the fuel injected amount or the torque generated amount when the engine is not properly operated or one of the measured temperatures is below the predetermined value.

The patent to Kakuho on the other hand, teaches that it is conventional in the art of an engine control, to utilize a controller (10) to limit the fuel injected amount (110, 182) or the torque generated amount (180, 170) when the engine is not properly

Art Unit: 3748

operated or one of the measured temperatures (150, 154) is below the predetermined value (See Col. 8, line 61 through Col. 20, line 10).

It would have been obvious to one having ordinary skill in the art at the time the invention was made to have utilized the control strategy on limiting the fuel injected and torque generated as taught by Kakuho in the Ashida method, since the use thereof would provide an improved engine control strategy.

Conclusion

9. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Ching Chang whose telephone number is (703)306-3478. The examiner can normally be reached on M-Th, 7:00 AM -5:00 PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Thomas Denion can be reached on (703)308-2623. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Application/Control Number: 10/618,737

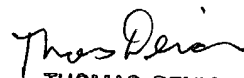
Page 9

Art Unit: 3748

Patent Examiner

A handwritten signature in cursive script, appearing to read "Ching Chang".

Ching Chang

A handwritten signature in cursive script, appearing to read "Thomas Denion".

THOMAS DENION
SUPERVISORY PATENT EXAMINER
TECHNOLOGY CENTER 3700